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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,105	12/23/2004	Tsutomu Yoshitake	Q85456	9481
23373 7590 02/04/2010 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037				
EXAMINER ARCERO, ADAM A				
ART UNIT 1795		PAPER NUMBER		
NOTIFICATION DATE 02/04/2010		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

sughrue@sughrue.com  
PPROCESSING@SUGHRUE.COM  
USPTO@SUGHRUE.COM

**Supplemental  
Notice of Allowability**

**Application No.**

10/519,105

**Examiner**

ADAM A. ARCIERO

**Applicant(s)**

YOSHITAKE ET AL.

**Art Unit**

1795

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the response filed on August 10, 2009.
2. ☒ The allowed claim(s) is/are 27,30-33 and 53-55.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| <ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br/>Paper No./Mail Date _____</li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application</li> <li>6. <input type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date _____</li> <li>7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____.</li> </ol> |
|---|--|

/Adam A Arciero/  
Examiner, Art Unit 1795

**FUEL CELL, ELECTRODE FUEL FUE CELL AND METHOD PRODUCING THEM**

Examiner: Adam Arciero      S.N. 10/519,105      Art Unit: 1795      December 4, 2009

**Detailed Action**

1.      The Applicant's request for reconsideration filed on August 10, 2009 was received. Claims 27, 30-55 are currently pending. Claims 34-52 are withdrawn.

2.      The text of those sections of Title 35, U.S.C. code not included in this action can be found in the prior Office Action issued on April 10, 2009.

**EXAMINER'S AMENDMENT**

3.      An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

4.      This application is in conduction for allowance except for the presence of claims 34-52 non-elected without traverse. Accordingly, claims 34-52 are cancelled.

***Claim Rejections - 35 USC § 103***

5. The claim rejections under 35 U.S.C. 103(a) as being unpatentable over NOBUAKI and WILLIAMS et al. on claim 27-32 and 53-54 are withdrawn, because Applicant's arguments are found to be persuasive.

***Claim Rejections - 35 USC § 103***

6. The claim rejections under 35 U.S.C. 103(a) as being unpatentable over NOBUAKI, WILLIAMS et al. and VAIDYANATHAN on claim 33 is withdrawn, because Applicant's arguments are found to be persuasive.

7. The claim rejections under 35 U.S.C. 103(a) as being unpatentable over NOBUAKI, WILLIAMS et al. and HAMPDEN-SMITH et al. on claim 55 is withdrawn, because Applicant's arguments are found to be persuasive.

***Reasons for Allowance***

8. Claims 27, 30-33 and 53-55 are allowed. The following is an examiner's statement of reasons for allowance: The invention of independent claim 27 recites: an electrode used for a fuel cell, the electrode comprising:

a substrate;

a current-collector arranged on one of surfaces of said substrate; and

a catalyst layer arranged on the other surface of said substrate, wherein;

said substrate contains carbon as a principal component;

said current-collector contains an element which will make carbide;

said current-collector and said substrate are bonded to each other and a carbide layer is formed at an interface between said substrate and said current-collector.

The closest prior arts of record, NOBUAKI and WILLIAMS et al., do not teach or suggest wherein a carbide layer is formed at an interface between said substrate and said current-collector. The disclosure of the instant application teaches of using a palladium powder brazing material and using a brazing method to bond the electrode and current collector together (pg. 13, Example 2). After said brazing material is coated onto the current-collector and the carbon paper (electrode) was put on said brazing material, the resultant is put in a vacuum furnace for a period of time and then naturally cooled, thereby bonding and forming a carbide layer between the carbon paper electrode and the nickel plate collector. NOBUAKI teaches of a fuel cell wherein an electrode and a charge collector are bonded together via adhesive glue. WILLIAMS et al. teaches of using a brazing powder to fuse a collector and an electrode. However, WILLIAMS et al. fails to disclose the specifics of the brazing method of the present application and heating the brazed assembly so as to form a carbide layer between the charge collector and the electrode. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ADAM A. ARCIERO whose telephone number is (571)270-5116. The examiner can normally be reached on Monday to Friday 8am to 5pm EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dah-Wei Yuan can be reached on 571-272-1295. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AA

/Dah-Wei D. Yuan/  
Supervisory Patent Examiner, Art Unit 1795